

## SCIENTIFIC STUDY OF THE EFFECTS OF *VAITARANA BASTI*, *KATIBASTI* AND *ANCHANA* (PELVIC TRACTION) IN THE MANAGEMENT OF *KATISHULA* WITH SPECIAL REFERENCE TO SPONDYLOLISTHESIS

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### ABSTRACT

**Introduction:** Spondylolisthesis is anterior or posterior slippage of a vertebra or the vertebral column in relation to the vertebrae below. Lot of research is carried out on spondylolisthesis in different views. Still in day to day practice, it becomes difficult to manage. Hence it is necessary to investigate scientifically the routinely practiced *Ayurveda* treatments *vaitarana basti*, *katibasti* and *anchana* (pelvic traction) in the Management of *Katishula* w.s.r. to spondylolisthesis. **Objective:** To investigate scientifically the effectiveness of routinely used *Ayurvedic* treatments *vaitarana basti*, *katibasti* and *anchana* in the patient's with *katishula* having spondylolisthesis of Grade I and Grade II. **Methods:** Study is unicentre, randomized, parallel group open trial performed for 03 years. 48 patients with a clinical diagnosis *katishula* having spondylolisthesis of Grade I & Grade II were randomized to four groups (GroupA -*vaitarana basti*, GroupB- *katibasti*, GroupC- *anchana* and GroupD- combine treatments). All group patients were given *deepan pachan* and *abhyang swedan* before main procedure and during follow-up period. Treatment was carried out for 59 days and weekly follow up for 08 weeks. **Results:** At 59 days *vaitarana basti* shows 50% result, *katibasti* 41.67%, *anchana* 25% and combine treatment shows 58.33% result. Statistically *vaitarana basti*, *katibasti*, *anchana* and combine treatments have shown significant result in relieving the *katishula* in spondylolisthesis. **Conclusions:** Statistically *vaitarana basti*, *katibasti*, *anchana* and combine treatments have shown significant result in relieving the *katishula* due to spondylolisthesis. Though treatments are effective and shown statistically significant symptomatic benefit but cure is difficult task hence it needs further scientific investigation.

**Keywords:** spondylolisthesis, *katishula*, lumbar pain, *katibasti*, *vaitarana basti*.

## INTRODUCTION

*Katishula* [Low back pain (LBP)] affects approximately 60–85% of adults during some point in their lives.<sup>[1–3]</sup> Fortunately, for the large majority of individuals, symptoms are mild and transient, with 90% subsiding within 6 weeks.<sup>[4]</sup> Chronic low back pain, defined as pain symptoms persisting beyond 3 months, affects an estimated 15–45% of the population.<sup>[5,6]</sup> For the minority with intractable symptoms the impact on quality of life and economic implications are considerable<sup>[7]</sup>.

Isthmic spondylolisthesis is the most common form; also called spondylolytic spondylolisthesis, it occurs with a reported prevalence of 5–7 percent in the US population. A slip or fracture of the intravertebral joint is usually acquired between the ages of 6 and 16 years, but remains unnoticed until adulthood. Roughly 90 percent of these isthmic slips are low-grade (less than 50 percent slip) and 10 percent are high-grade (greater than 50 percent slip).<sup>[8]</sup>

Despite the high prevalence of low back pain within the general population, the diagnostic approach and therapeutic options are diverse and often inconsistent, resulting in rising costs and variability in the management throughout the country.<sup>[9]</sup>

In basic text of *Ayurveda Katishula* is one of the common diseases but not explained in details and separately. It is the manifestation of various lumbar spine diseases or secondary to various diseases. *Katishula* patients are in increasing trend hence it is necessary to study in detail. Various factors are responsible for the increasing trend of *Katishula* such as change in life style, diminishing quality of food, continuous travelling on vehicle, increasing stress, mechanical injury etc; which results in decrease strength of *dhatu*. Lack of strength in *dhatu*s of lumbar region predisposes the disease *Katishula*.

In present study, *Katishula* with special reference to spondylolisthesis is selected. Spondylolisthesis is anterior or posterior slippage of a vertebra or the vertebral column in relation to the vertebrae be-

low. Such forward slippage is referred to as anterolisthesis, while backward slippage is retrolisthesis.<sup>[10]</sup> Spondylolisthesis was first described in 1782 by Dr Herbinaux, a Belgian obstetrician. He reported in a small number of patients, a bony prominence anterior to the sacrum that obstructed the vagina.<sup>[11, 12]</sup> The term “spondylolisthesis” was coined in 1854, from the Greek words *spondylo*, meaning spine, and *listhesis*, meaning to slip or slide.<sup>[11]</sup> It is difficult to cure by conservative management. Surgical cure has no guarantee of recurrence or complete cure. Lot of research is carried out on spondylolisthesis in different views. Still in day to day practice, it becomes difficult to manage. This disease is challenge for researchers. Hence it is necessary to investigate scientifically the routinely practiced *Ayurveda* treatments *vaitaranabasti*, *katibasti* and *anchana* (pelvic traction) in the Management of *Katishula* w.s.r. to spondylolisthesis.

## METHODS

Study is unicentre, randomized, parallel group open trial performed for 03 years. 48 patients with a radiological diagnosis as spondylolisthesis of Grade1 and Grade2 with *Katishula* without any associated diseases and without neurological complication were randomized to four groups. 12 patients were treated in each group for 59 days. The patients were assessed at 0, 1,2,3,4,5,6,7 and 8 weeks by a researcher who performed a physical examination and physical performance tests and clinical observations were recorded on their case paper.

Improvement was classified in 05 categories: Complete improvement (Relief in the sign and symptoms above 75% after treatment), Marked improvement (Relief in sign and symptoms between 51% to 74% after treatment), Moderate improvement (Relief in sign and symptoms between 25% to 50% after treatment), Mild improvement (Relief in sign and symptoms up to 24% after treatment), No improvement (No change in sign and symptoms).

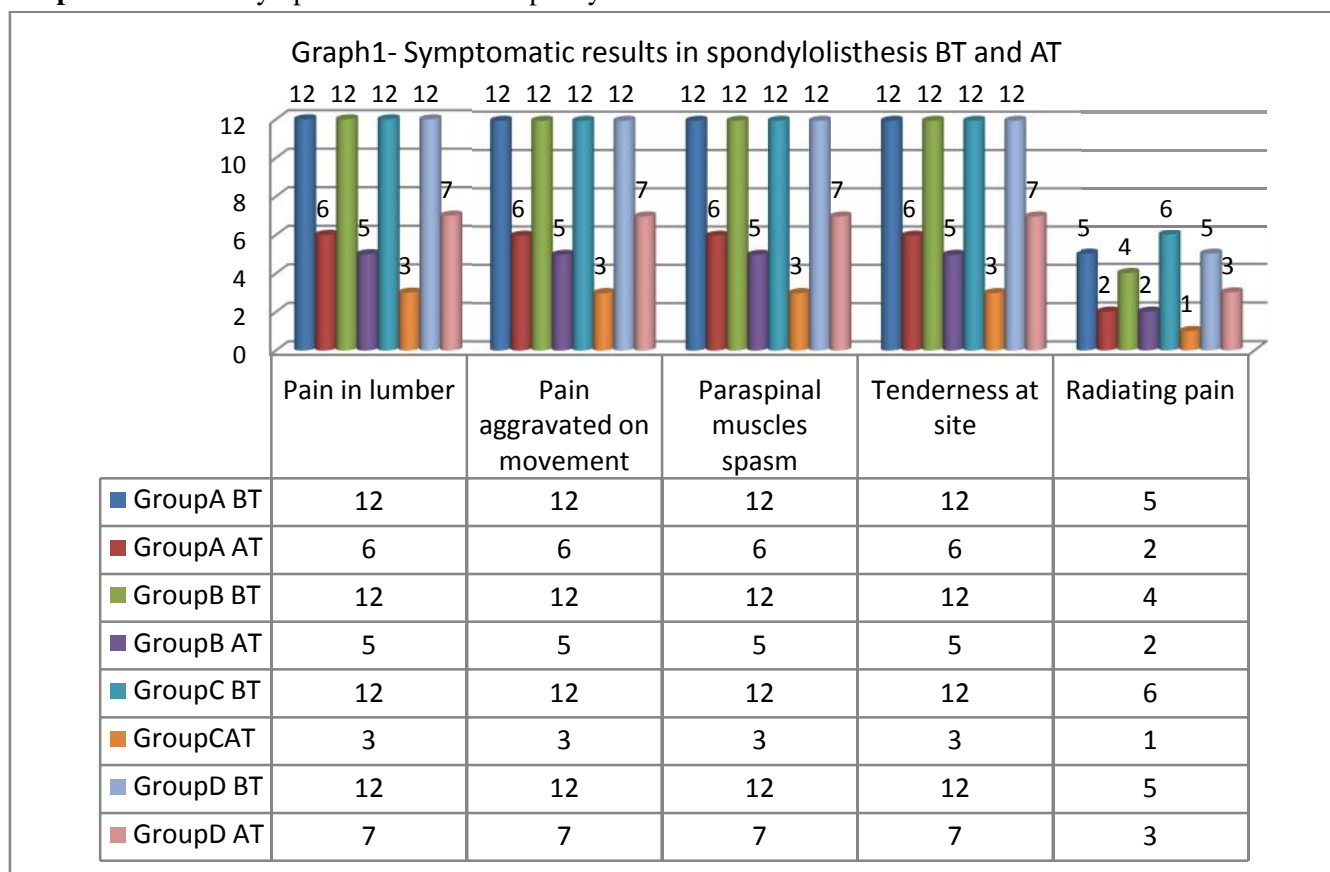
**Table 1:**

Group	First 7days	Next 15days	Next 7 days	Next 15days	Next 15 days
Group A	Abhyanga and swedana	Vaitarana basti <sup>[13]</sup>	Abhyanga and swedana	Vaitarana Basti	Abhyanga and swedana
Group B	Abhyanga and swedana	Katibasti <sup>[14]</sup>	Abhyanga and swedana	Katibasti	Abhyanga and swedana
Group C	Abhyanga and swedana	Anchana <sup>[15]</sup>	Abhyanga and swedana	Anchana	Abhyanga and swedana
Group D	Abhyanga and swedana	Combine treatment	Abhyanga and swedana	Combine treatment	Abhyanga and swedana

**RESULTS**

Recruited patients were 48 and equally randomized to four groups. Dropped out cases were not included in recruited cases. All groups show statistically significant symptomatic relief.

**Graph1:** shows the symptomatic results in spondylolisthesis before and after treatment. Pain in



Lumbar region (*katishula*), pain aggravated on movement, paraspinal muscles spasm, tenderness at affected site these four symptoms and sign were present initially in all recruited patients. In *vaitarana basti* group these four symptoms and signs

were reduced in 6(50%) cases. *Katibasti* treatment improved these symptoms and signs in 5(41.67%) patients. *Anchan* (traction) relieved in 3(25%) cases. *Vaitarana basti*, *katibasti* and *anchana* as a

combine treatment reduced these symptoms and signs in 7 (58.33%) patients.

In group A radiating pain was present initially in 5 (41.66%) patients and reduced in 2 (40%) cases. In *Katibasti* group it was recorded in 4 (33.33%) patients and relieved in 2 (50%) cases.

In group C it was observed in 6 (50%) cases and subsided in 1(16.67%) patient. In combine treatment group it was recorded in 5(41.66%) patients and reduced in 3(60%) cases.

X-ray findings before and after treatment have not shown any change in spondylolisthesis grade and statistically insignificant but patients were showing symptomatic relief.

### STATISTICAL ANALYSIS

All analyses were performed using an intention to treat basis. Patients withdrawn from the study according to protocol or for other reasons or who were lost to follow-up were analyzed using the technique of last observation carried forward. An analysis of secondary completers was also performed.

Continuous variables were analyzed using regression models, entering baseline values as covariates and treatment as an explanatory variable. Observations recorded at 0, 3, 6 and 8 week and statistically analyzed. To study the difference between two times stages paired t test is used. The mean relief along with standard error and corresponding t values are presented for respective groups and time stages. To examine the treatment effect over time in a more complete manner, repeated measures analyses were also performed including the data from each visit simultaneously. To examine predictors of response to treatment, the groups were stratified according to possible predictors; the above tests were performed on each stratum and a formal interaction test was performed. All statistical analyses were performed using statistical software.

Statistically effect due to *vaitarana basti* was significant after 3, 6, and 8weeks.T- value (-9.53,-14.18,-14.38) become smaller as period of treat-

ment *vaitarana basti* increases. This indicates that effect due to *vaitarana basti* was more positive as time period increases.

Statistically effect due to *katibasti* was significant after 3, 6 and 8weeks. T- Value (-10.38,-17.23,-17.38) become smaller as period of treatment *katibasti* increases. This indicates that effect due to *katibasti* was more positive as time period increases.

Statistically effect due to *Anchan* was significant after 3, 6 and 8weeks. T- Value (-13.00, -14.02, -12.54) become smaller as period of treatment increases. This indicates that effect due to *Anchan* is more positive as time period increases up to 6weeks. At 8 week the T-value become grater, it shows that effect due to *Anchan* was statistically less significant after 8 weeks.

Statistically effect due to combine treatment was significant after 3, 6 and 8 weeks. T- Value (-9.95,-12.64,-14.07) become smaller as period of combine treatment increases. This indicates that effect due to combine treatment is more positive as time period increases. From these observations, we can conclude that *vaitaran basti*, *katibasti*, and combine treatment along with *snehana*; *swedana* and complete rest are statistically significant after time stages 3, 6 and 8 weeks in relieving symptoms and signs. *Anchana* (Traction) along with *snehana*, *swedana* and complete rest is statistically significant after time stages 3 and 6 weeks but become less significant after time stage of 8 week in relieving symptoms.

### DISCUSSION

This investigation was designed to mirror current *Ayurveda* clinical practice, approaching all eligible patients passing through the hospital service with a radiological diagnosis of spondylolisthesis with *Katishula*. Researcher used imaging as a recruitment criterion; however, the patients recruited had important clinical characteristics of *Katishula* and

pain gets aggravated on movements. The dropped out cases and withdrawn cases according to the protocol are not included in given recruitment number.

The results confirm the symptomatic short term benefit afforded by *vaitaranabasti*, *katibasti*, and *anchana* and combine treatment. However, it is necessary to follow the patients months or years together to study medium- or long-term benefit in terms of symptoms, function, and return to work or the need for surgery. The non responding cases of spondylolisthesis were referred to secondary care center after 8 weeks.

These treatments are already effective in curable conditions of *Katishula* given by *Ayurveda* enlightened *Aptas* but it is necessary to analyze in new parameters. A vital review of the literature concluded that there is little clinical research work found with small size on spondylolisthesis hence it is difficult to interpret. This study, clarifies the situation, well-designed randomized trial. However, other evidence suggests dissimilar outcomes because results are influenced by various factors: individual, perfection in procedure. *Samprapti*, duration of disease, associated disorders, severity of disorder, patient's sincerity in treatment etc.

This study data demonstrate that treatments *vaitaranabasti*, *katibasti*, pelvic traction and combine treatment didn't correct structural changes in spondylolisthesis hence these treatments may not reduce the need for surgery but in early stage symptomatic relief and prevention of progress is possible with careful approach.

Combine treatments (*vaitaranabasti*, *katibasti* and *anchan*) is showing better results as compared to single treatments. It means that these three Combine treatments are acting synergistically. *Vaitaranabasti* is acting at the root of *vata* diseases, i.e. *Pakvashaya* and systemic level to improve *vikar vighat* mechanisms of body, *Katibasti* is giving *snehana swedana* effects locally at *Kati region* i.e. the site of *Samprapti*, and *Anchan* is giving rest, support to *kati kasheruka sandhi* along with stretching effect which is helpful for body mechanisms

to recover the disease. These three are having their own different mechanism or action and are synergistic to each other hence, are giving better results.

This study record shows important observations like females are more affected than male (62.5%), predominant age group is of 31 to 60 yr. (64.58%), highly educated people have low incidence of the spondylolisthesis (8.33%), labor group peoples are prone for this disease (29.16), peoples having *vishmaghi* (58.33%), *vitvisanga* (62.5%) were commonly affected and Allopath treatment was initially preferred by maximum patients (66.66%). There were few reported side-effects, *vaitarana basti* reported abdominal discomfort in 2 patients for short period. *Katibasti* posture aggravated the symptoms in 3 patients. Traction application aggravated the symptoms in 2 patients.

## CONCLUSION

In present clinical research study *vaitaran basti*, *Kati basti*, *Anchan* and these combine treatment all four groups have shown statistically significant symptomatic relief in *Katishula* due to spondylolisthesis. Though treatments are effective and shown statistically significant symptomatic benefit but cure is difficult task hence it needs further scientific investigation.

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## REFERENCES

1. Frymoyer JW. Back pain and sciatica. N Engl J Med. 1988; 318:291-300.
2. Geen J, Edelaar M, Janssen M, et al. The long-term effect of multidisciplinary back training: a systematic review. Spine. 2007; 32(2):249-55. doi: 10.1097/01.brs.0000251745.00674.08.
3. Andersson GB. Epidemiological features of chronic low pain. Lancet. 1999; 354:581-5. doi: 10.1016/S0140-6736(99)01312-4.

4. Dillane J, Fry J, Kalton G. Acute back syndrome—a study from general practice. *Br Med J.* 1966; 2:82–4. doi: 10.1136/bmj.2.5505.82.
5. Andersson HI, Ejlertsson G, Leden I, et al. Chronic pain in a geographically defined general population: studies of differences in age, gender, social class and pain localization. *Clin J Pain.* 1993; 9:174–82.
6. Andersson GB. The epidemiology of spinal disorders. In: Frymoyer JW, editor. *The adult spine: principles and practice.* 2. Philadelphia, PA: Lippincott-Raven; 1997.
7. Tulder MW, Koes BW, Bouter LM. A cost-of-illness study of back pain in The Netherlands. *Pain.* 1995;62:233–40. doi:10.1016/0304-3959(94)00272-G.
8. Adult Spondylolisthesis in the Low Back". American Academy of Orthopaedic Surgeons. Retrieved 9 June 2013.
9. Deyo R, Cherkin D, Conrad D. Cost, controversy, crisis: low back pain and the health of the public. *Annu Rev Publ Health.* 1991; 12:141–56. doi:10.1146/annurev.pu.12.050 191.001041.
10. Irani Z. Spondylolisthesis-imaging. *E-Medicine;* 2011. Accessed 14th May; 2011. Available: <http://emedicine.medscape.com/article/396016-overview>.
11. Chain JC, Chan WP, Katz JN, Chang WP, Christam DC. Occupational and personal factors associated with acquired lumbar spondylolisthesis of urban taxi driver. *Occup Environ Med.* 2004; 61:992-998. doi: 10. 1136 / oem.2003.011775.
12. Wikipedia, Spondylolisthesis.2008. Accessed 4<sup>th</sup> July; 2012. Available: <http://en.wikipedia.org/wiki/Spondylothesis>. 2008.
13. Kavivarya shri Shaligram Vaidya edited by Vaidya Shankar Lalaji Jain, Vangasen Samhita, Hindi commentary, Khamraj Shrikrishna-das Prakoshan, Mumbai, Edition 1996, basti-karmadhikar 24:186-90P.237.
14. Yadaiah P, Kati basti a practical Approach. *National Journal of Ayurveda,* March 1995; 5:2-3.
15. Kaviraja Ambikadutta Shastri, editor. *Sushruta Samhita (Part II) with Ayurvedatatva sandipika Hindi commentary,* Chaukhambha Sanskrit Sansthana, Delhi, edition 2011. chikitsa sthana 3-18.P.210.

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